

VIRGINIA WILDLIFE

MARCH 1985

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Trot Stocking
Page 11

Bierly

VIRGINIA WILDLIFE

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Inland Fisheries

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Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources

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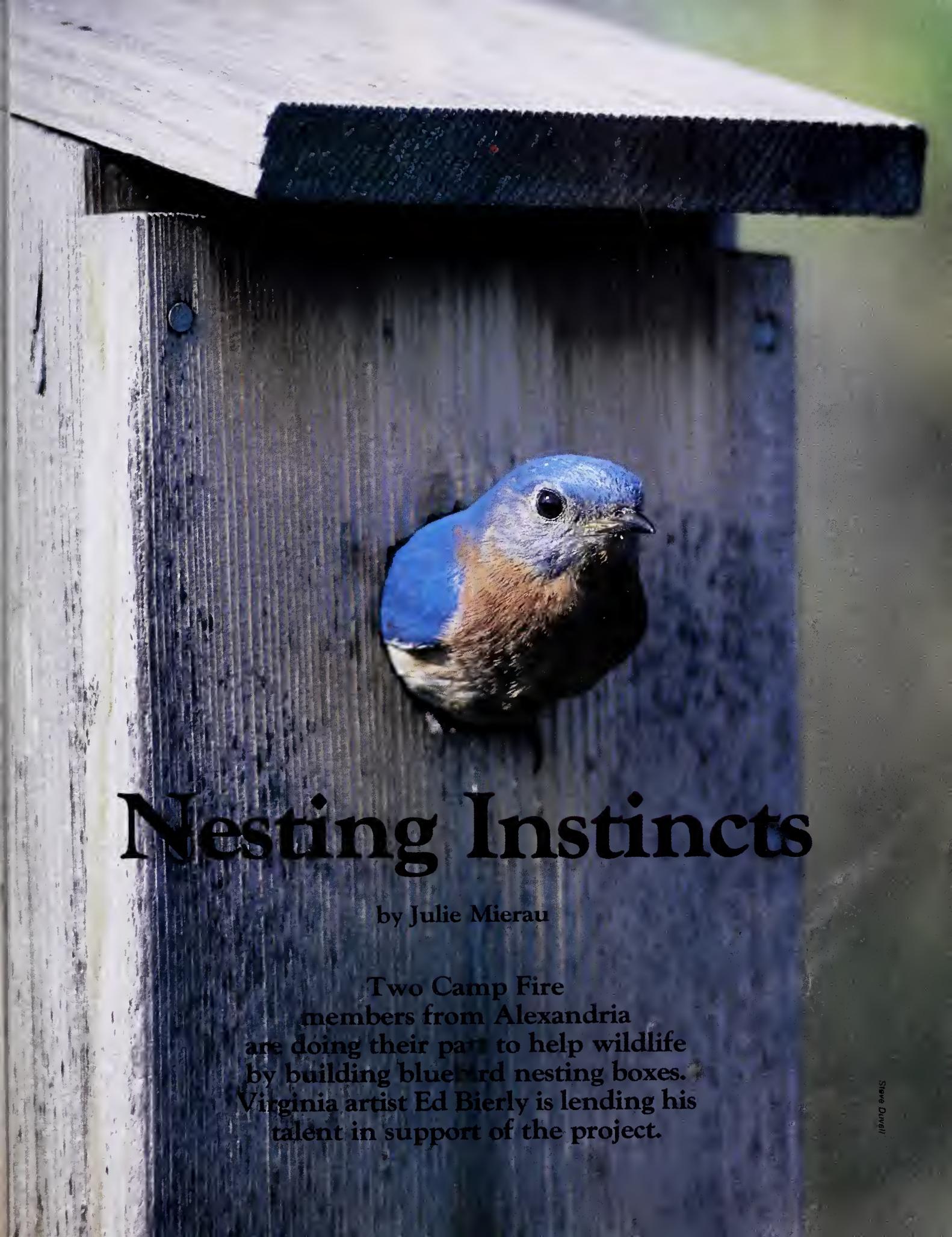
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Cover

Eastern bluebirds by Ed Bierly, Lorton. Mr Bierly produced this and two other paintings to commemorate the 75th anniversary of Camp Fire, Inc., which is this month. See page 3.

The back cover: National Wildlife Week is this month; see page 32. Photos by Mel White and Michael Gadomski.



Nesting Instincts

by Julie Mierau

Two Camp Fire members from Alexandria are doing their part to help wildlife by building bluebird nesting boxes. Virginia artist Ed Bierly is lending his talent in support of the project.



Western Bluebirds

Edward J. Bierly

It takes help from lots of people to build new homes for the endangered North American bluebird. Ask Jenny and Katie Allan. They worked hard last spring to build two bluebird nesting boxes. They had to plan how to build the boxes and find the right spot for them after they were done. They had to do lots of sawing, hammering and painting, too. But they had help. The girls started the project as part of their activities in Camp Fire, the national coed youth agency formerly known as Camp Fire Girls. Camp Fire provided incentive and instructions for building the boxes. Then Dad got involved by helping put the boxes together. Now the project involves the whole neighborhood, with the boxes being placed in a meadow next to the girls' home. The boxes have to be kept clean and free of other bird nests so the bluebirds will make their homes there.

According to Robin Wolfe, the girls' Camp Fire leader, "By taking part in this project, the girls learned that it takes care on the part of everyone to keep the bluebirds there in the neighborhood." Has all the work paid off? "There aren't any bluebirds living in the boxes yet, but the girls told me that they've seen a bluebird in the neighborhood. So maybe it won't be long before there is a family of bluebirds living there," said Ms. Wolfe.

Jenny and Katie are fourth and fifth graders from Alexandria. This year, all seven members of their Camp Fire group will build homes for bluebirds as they take part in Camp Fire's national Save the Bluebird project. And the nesting boxes they build will be placed near Mt. Vernon.

The Allan sisters are not the only Camp Fire members trying to help the bluebird. Camp Fire boys and girls, including first through third graders called Blue Birds, have been working to save the endangered bluebird by building and placing special nesting boxes along bluebird trails across the United States. In fact, Camp Fire members have provided nearly 30,000 new homes for bluebirds. All Camp Fire members who participate in the project earn a special emblem for their work.

Bluebirds used to be among the most common songbirds in the United States, even in residential areas of large cities. Today, the colorful birds are fighting for survival, and many Americans have never seen one. One of the major problems bluebirds face is the decline in available nesting sites, such as hollow trees, as formerly rural land is developed.

There are three species of North American bluebirds—the eastern, the western and the mountain bluebird. The eastern and western bluebirds are blue with a red breast, and the mountain bluebird is solid turquoise. The number of eastern bluebirds especially has dropped dramatically in the last 25 years, possibly by as much as 90 percent. However, once bluebirds find a suitable nesting place, their numbers often increase year after year, as long as there are enough nesting sites available.

Serving as "landlords" to bluebirds is not something new to Camp Fire members. They've been involved in bluebird conservation for more than 20 years. During the three-year period from August 1980 to August 1983, over 10,000 young people earned the recognition emblem for this project.

In 1982, 112 boxes built by Camp Fire groups across the country were placed on the grounds of the United States Air Force Academy near Colorado Springs, Colorado, where all three species of bluebirds are found. Bluebirds have taken up residence in 43 of the boxes, and other birds have moved into 34 of them. Each Camp Fire group has received a "deed" noting the location of their nesting box and the date it was placed.

In recognition of Camp Fire's national involvement with bluebird conservation, the North American Bluebird Society presented the youth agency with its Lawrence F. Zeleny Founders Award in March 1983. The National Wildlife Federation also presented an award to Camp Fire in November 1983, recognizing the organization's efforts.

Because of Camp Fire's commitment to saving the bluebird, and in conjunction with the celebration of the agency's 75th anniversary this month, noted wildlife artist Edward J. Bierly of Lorton, Virginia, was commissioned to publish a portfolio of prints depicting the three species of North American bluebirds.

In talking about his work on the bluebird paintings, Bierly said, "This was a very special project for me. I had been involved with bluebirds at the time the project for Camp Fire was suggested, so every-

**"Once bluebirds
find a suitable nest-
ing place, their
numbers often
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year."**



Mountain Bluebirds
Edward J. Bierly

thing just fell into place." In order to study the birds and capture their beauty, he put nesting boxes in his back yard. By the time the paintings were complete, bluebirds had taken up residence in all three of the boxes.

Inspired by Camp Fire's watchword, "Wohelo," taken from the words "work, health and love," Bierly portrayed the western bluebirds in a setting illustrating work, the eastern bluebirds in a setting illustrating health, and the mountain bluebirds in a setting illustrating love. The original paintings were exhibited at Philadelphia's Newman Gallery in November 1983, at the time of the national Camp Fire convention in that city. His painting of eastern bluebirds is on the cover of this issue of *Virginia Wildlife*. Prints are available from the artist (see box).

Mr. Bierly's paintings have been exhibited at the Royal Ontario Museum, the Smithsonian, the National Audubon Society, the New York Natural History Museum and the National Wildlife Federation in Washington, D.C. His paintings have been reproduced in such magazines as *National Wildlife*, *International Wildlife*, *Reader's Digest*, *The Arts Magazine*, and of course, *Virginia Wildlife*. □



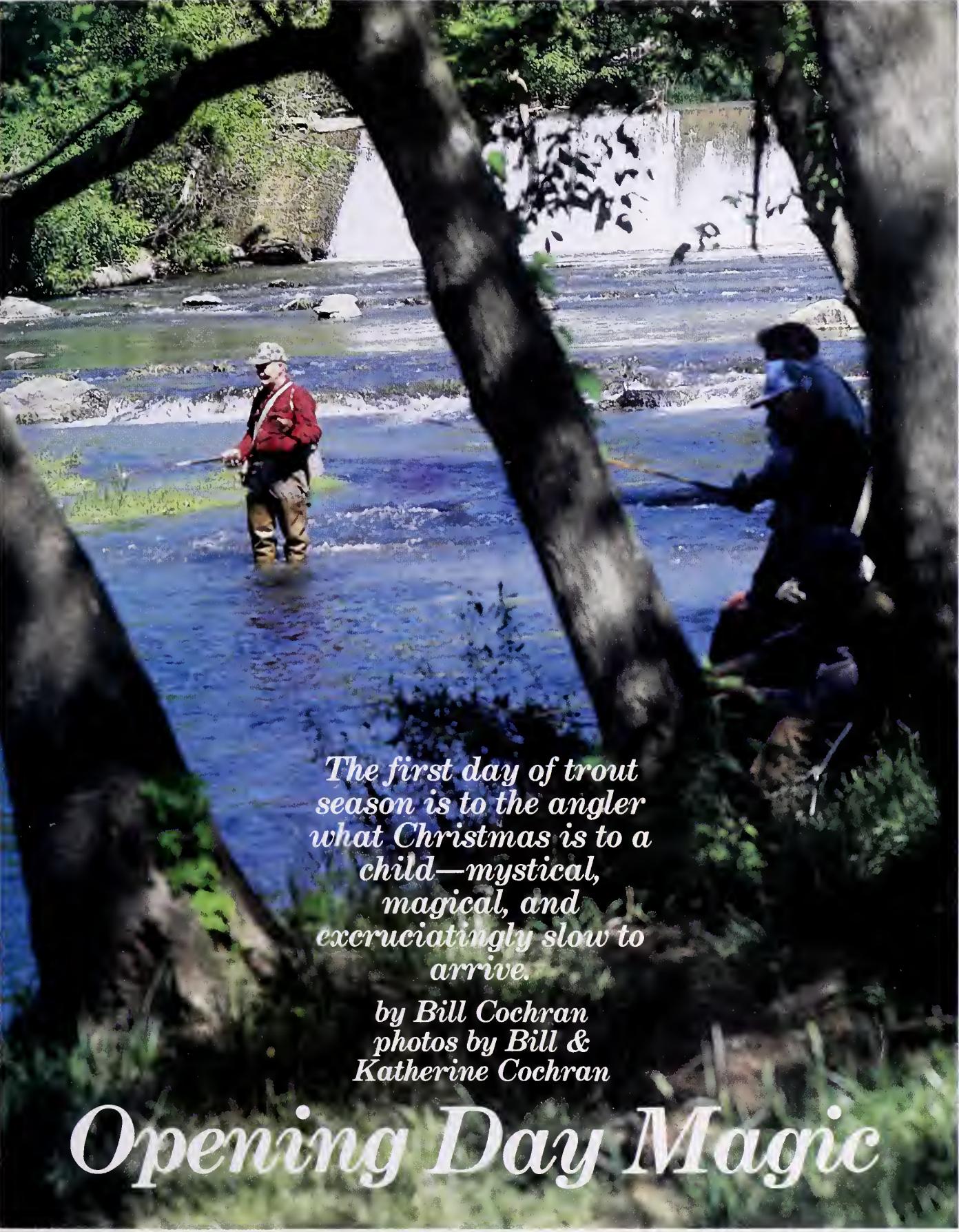
(Above) Camp Fire members watch as one of their nesting boxes is readied for occupancy. (Below) Artist Ed Bierly with Camp Fire girls.

Prints Available

The cover painting of eastern bluebirds and the paintings of western and mountain bluebirds accompanying this story are the work of Virginia artist Ed Bierly. All three were commissioned by Camp Fire, Inc. to commemorate their 75th anniversary. A portfolio of three 15" by 20" prints of these paintings is available. Write to EJB Editions, 8833 Lake Hill Drive, Lorton, Virginia 22079 for information on obtaining these prints.

The fledglings in the cover painting were raised in a bluebird box placed in the Lorton area by Scott Barrett, a friend and neighbor of Mr. Bierly. This was only one of many boxes Scott built, and he was awarded the Youth Conservationist of the Year trophy by the Virginia Wildlife Federation in 1982 for his efforts.





The first day of trout season is to the angler what Christmas is to a child—mystical, magical, and excruciatingly slow to arrive.

*by Bill Cochran
photos by Bill & Katherine Cochran*

Opening Day Magic

Much is said these days about leg-long stripers, mysterious muskie and black bass that sport bellies the size of footballs, but few things speak more elegantly of any species than opening day does of trout.

Trout fishing traditionally begins at noon the first Saturday of April, and is the day winter finally loses its grip on spring, no matter what the weather.

Take a cruise up or down most any of the nearly 200 streams and impoundments stocked for the occasion, and you soon learn that the one thing opening day anglers aren't bothered with is loneliness. Some of the more popular holes will attract as many as 100 of the hip-booted hosts who come to play a game of ring around the rainbows. Never mind that there aren't enough trout for everyone to catch a limit of six. That's something for the other guy or gal to worry about.

Ah, Izaak Walton! And you thought fishing was for tranquil, noncompetitive souls. Maybe later. Not opening day. What could be more competitive than a half-dozen worm-threaders, salmon-egg soakers and corn-casters vying for the same trout sulking in a shadowed pool beneath a boulder? There are few Walden Ponds to be found this festive day!

So how do you manage to catch trout amid the tangle of traffic, tangle of lines and tangle of nerves that are a part of opening day? How do you wash your soul in riffles sparkling in the sun when the hip boots of other fishermen are planted in every puddle within sight?

There are scoffers who say you can't, at least you can't do the latter. Perhaps these are the same people who say there is no Santa Claus. Die-hard anglers know that the fish of their fascination has a special magic, one that can embody the spirit of wild places, of long ago times. When you add trout—even hatchery-reared trout—to a pool of water, what you have is an incarnation of that innocent era, be it fact or fiction, when everything was good and perfect in life. If you don't believe it, take a look at the intent expressions on the faces of fishermen 10 minutes before the opening gun, their rods poised in readiness, angled upward and nearly



The worm-threaders, salmon-egg-soakers and corn-casters vying for trout.

A landing net can be an important tackle item when a fish is dancing at the end of your line.



meeting in spots, like outstretched swords preparing the pathway for some kingly event.

Like most grand occasions—weddings, anniversaries, Christmas—the opening day of trout season can be excruciatingly slow in coming, as if time were stuck in its tracks, then, suddenly, it is on you before you are ready. Don't be deceived. Just because the season opens at noon does not mean it has a leisurely birth. It is imperative that you be at streamside at least one-half hour early. An hour is even better, and many prefer more leeway than that. What you want to do is select a productive hole and reserve a fishing spot—with your body.

Good anglers read trout pools like good golfers do putting greens. The movement of the water is studied carefully to determine how it will carry your bait to feeding stations, where trout await with gaping mouths. At nearly every major pool, there will be fishermen who catch a limit and those who catch nothing. Who says skill isn't involved on opening day?

By 11:30 a.m., nerves are stretched tighter than monofilament line. Even though you have staked out your fishing spot early, someone, as welcome as a wart hog at a picnic, is certain to squeeze in beside you a few minutes before the season begins, and with the question of the day.

"Hey buddy! You got the time?"

You check your watch, even though you checked it 30 seconds before, and 30 seconds before that. High noon approaches slowly, yet deliberately, as drama builds with the intensity of gunmen riding into town after Gary Cooper.

Then is it here! A rain of worms, salmon eggs, corn, cheese, minnows, spinners—you name it—hit the ice-cold water and an impressive percentage blissfully disappear into the yawning mouths of trout. Rods bow downward and lips curl upward as brooks, browns, and rainbows dance on the end of lines and send electrifying shock waves up rods clinched with white-knuckle grips. It is not a time when deficits, unemployment or high interest rates are given dutiful thought.

Instead it is an occasion to ponder over the tackle and techniques that will afford you the best results and provide you the most enjoyment.

Trout can be caught on a variety of tackle, but as a rule, they are savored most highly when rods, reels and lines are kept lightweight and hooks small. For opening day and thereafter, it is difficult to top an ultralight spinning rod matched with a small, high-quality spinning reel. The rod should be sensitive and flexible enough to toss delicate baits and fingernail-size lures into tight spots.



Salmon eggs, corn and small spinners are among the most popular offerings.

It should be equipped with hard-polished, friction-free guides that will feed out line with the least resistance and will withstand the cutting effect of small-diameter monofilament.

Line somewhere around 4- to 6-pound is ideal in the hands of more experienced fishermen. What you are looking for is something light enough to handle lures and baits of modest weight, yet hefty enough to keep trout from snapping off on snags, brush or rocks. Six-pound test is an ideal choice for opening day, although eight will serve the novice better. As the season progresses, more experienced fishermen will move down to 4-pound line when low water conditions and season-wise trout demand it.

Anytime line of the 4- to 6-pound class is used, fishermen should constantly be alert for nicks and abrasions that will weaken the monofilament. The last three feet should be clipped frequently and the hook or

lure retied to avoid losing a fish to a weak spot.

Baits and lures generally are most realistic when presented with as little weight as possible; however, essential to every trout angler's tackle box are split shots. There will be many times when fishing a deep pool or when casting to streams, flushed and rowdy due to spring rains, that a split shot or two is necessary to get your offering down to the holding areas of trout.

Split shots should be added only as necessary, and they should be kept small. It is preferable to have three small ones attached to your line rather than a single large one. The result is better control of your bait or lure and less likelihood of becoming snagged. The round-type split shots are less snag-prone than the clip-off kind, even though they can be difficult, if not impossible, to remove without cutting your line. Long-nosed pliers are a good tool for attaching split shots, and they also come in handy for dislodging stubborn hooks from trout.

Since trout have relatively small mouths, hooks of modest size should be employed. In addition, such hooks are easier to disguise in baits. Beginners may want to use a size 6 or 8, while more experienced fishermen may choose a 10. The bigger the number, the smaller the hook. It is not a bad idea to carry a couple of sizes to match the conditions you encounter and to cope with those times when one size displays better hooking qualities than another.

Although hatchery-reared trout have a reputation for being nondiscriminatory in their appetites, there are occasions when they can be exceedingly selective, and anglers should go afield with that in mind. It is prudent to carry along two or three kinds of baits or lures.

If you were to conduct a survey along most stocked streams you'd likely discover that salmon eggs, corn and worms are the most frequently used baits. Salmon eggs come in a variety of colors and flavors, with orange the basic color. It is well to select a second color, such as white or yellow, in case the trout you are after have seen one too many orange eggs wash by them.

Corn—yes, we are talking about the kind right out of the Jolly Green Giant can—has grown increasingly

1985 • Trout •

Overall trout allocations will be similar to those of last year. The Game Commission will stock trout in approximately 160 streams and 16 ponds in 39 counties of the Commonwealth in 1985. As has been the case in previous years, some changes have occurred in the stocking plan. The lower portion of Big Reed Island Creek and a portion of Little Reed Island Creek in Carroll County have been lost due to posting. Mill Creek in Botetourt County has been lost due to a change in land ownership. On the plus side, Meadow Creek in Floyd County has been returned to the stocking list as have Wilkins Creek in Frederick County, Bark Camp Lake in Wise County and the Roanoke River in Roanoke City. Inseason trout stocking will be carried out from April 15 through June 7. No additional trout introductions will be carried out after that. □



Legend:

B—Brook Trout

R—Rainbow Trout

Bn—Brown Trout

*—National Forest Waters

¹—Brook stocked after November 1

	Preseason	April 15-30	May 13-23	May 28- June 5
ALBEMARLE COUNTY				
Moormans River (N. & S. Forks)	B,R	B,R	B,R	
City Water Works (Sugar Hollow)	R	R	R	
ALLEGHANY COUNTY				
Smith Creek*	B	B	B	
Pounding Mill Creek*	R	R	R	
Jerry's Run*	R	R		
Clifton Forge Reservoir*	B	B	B	B
AMHERST COUNTY				
Pedlar River (Upper)	B,R	B,R	R	
Pedlar River (Lower)	R,Bn	R	R,Bn	R
Piney River (S.Fork & Proper)	B	B	B	
Brown's Creek*	B	B	B	
Davis Mill Creek*	B	B	B	
Little Irish Creek*	B	B	B	
AUGUSTA COUNTY				
Back Creek (S.Fork & Proper)	R	R	R	
North River (Gorge)	R	R	R	
North River* (Upper)	B	B	B	
Falls Hollow* (Buffalo Branch)	B			
Ramsey's Draft*	B	B	B	
Braley Pond*	R	R	R	R
Back Creek*	R	R		
Upper Sherando Lake*	R	R	R	R
Lower Sherando Lake*	R	R	R	R
Hearthstone Lake*	R	R	R	R
Elkhorn Lake*	R	R	R	R
BATH COUNTY				
Bullpasture River	R,Bn	R,Bn	R,Bn	R
Jackson River (Hidden Valley)	R,Bn	R,Bn	R,Bn	R
Spring Run	B,R,Bn	B,R,Bn	B,R,Bn	R
Back Creek*	R	R	R	
Wilson Creek*	B	B	B	
Pads Creek*	R	R	R	
Jackson River* (Route 623)	R,Bn,	R,Bn	R,Bn	R
BEDFORD COUNTY				
Hunting Creek*	B	B	B	
BLAND COUNTY				
Wolf Creek	R,Bn	R,Bn	R,Bn	R
Laurel Fork Creek	R	R	R	
Lick Creek*	R	R	R	
BOTETOURT COUNTY				
Jennings Creek	B,R	R	R	R
Mill Creek	R,Bn	R,Bn	R	
Roaring Run	R,Bn	R,Bn	R	R
North Creek*	R	R	R	
Middle Creek*	R	R	R	
McFalls Creek*	R	R	R	
BUCHANAN COUNTY				
Dismal River	B,R	B,R	B,R	R
CARROLL COUNTY				
Big Pauls Creek	B	B		
Little Reed Island Creek	R,Bn	R,Bn	R,Bn	R
Stewart's Creek	B	B		
Big Reed Island Creek	B,R	B,R	R,Bn	Bn
Crooked Creek	B,R	B,R	B,R	R
Burkes Fork	B,R	B,R	B,R	R
Laurel Fork Creek	B	B	B	
Snake Creek (Fish-for-fun)			R,Bn	
Lovills Creek	R			
CRAIG COUNTY				
Potts Creek	B,R,Bn	B,R,Bn	B,R,Bn	R
Barbours Creek	B,Bn	B,Bn	B,Bn	B
Barbours Creek (N. Fork)	B	B	B	
Cove Creek	B	B	B	
DICKENSON COUNTY				
Frying Pan Creek	R	R	R	R
Russell Fork River	R	R	R,Bn	R
Pound River	R,Bn	R,Bn	R,Bn	R
FLOYD COUNTY				
Burkes Fork	B,Bn	B,Bn		
Howell Creek	B	B	R	
Little River (W. Fork)	B,R	R	R	
Meadow Creek	R			
Laurel Fork Creek	B			

Stocking Plan

	Preseason	April 15-30	May 13-23	May June 5	May 28	Preseason	April 15-30	May 13-23	May June 5	May 28
Mira Fork Creek	B					Mill Creek	B, R, Bn	R, Bn	R, Bn	R
Goose Creek	R, Bn	R, Bn				Irish Creek	B, R	B, R	B, R	
Little River	R, Bn	R, Bn	R, Bn	Bn		South River	R, Bn	R, Bn	R, Bn	R
Little Indian Creek	R	R				Maury River (Goshen Pass)	R, Bn	R, Bn	R, Bn	
Little River Fish for Fun	R	R				ROCKINGHAM COUNTY				
Rush Fork Creek	B					Shenandoah River (N. Fork)	B, R, Bn	B, R, Bn	R, Bn	
FRANKLIN COUNTY						Dry River	B, R	B, R		
Maggadee Creek	B, R	B, R				Briery Branch	R	R	R	
Runnett Bag Creek	R, Bn	R, Bn	R, Bn			Silver Lake	B, R, Bn	R, Bn		
FREDERICK COUNTY						German River	R, Bn	R	R	
Back Creek (Upper)	B, R	B, R				Boone's Run*	B	B		
Back Creek (Lower)	B, R	B, R				Shoemaker River*	R	R		
Hogue Creek	B, R, Bn	B, R, Bn				Skidmore Fork*	B	B		
Cedar Creek	B, R, Bn	B, R, Bn	R	R		Briery Lake*	R	R	R	
Paddy Run	R, Bn	R, Bn	R, Bn			Hone Quarry Lake*	R	R	R	
Clearbrook Lake	B, R, Bn	B, R, Bn	B, R, Bn	R		Hone Quarry Run*	R	R		
Wilkins	B, R, Bn	B, R, Bn				RUSSELL COUNTY				
GILES COUNTY						Big Cedar Creek				
Big Stony Creek	B, R, Bn	B, R, Bn	R, Bn	R		Laurel Bed Lake ¹	R, Bn	R, Bn	R, Bn	R
Dismal Creek*	B	B	B	B		SCOTT COUNTY				
GRAYSON COUNTY						Little Stony Creek	B, R	B, R	R	R
Big Wilson Creek	B, R	B, R	R			Stock Creek	R	R	R	
Middle Fox Creek	B, R	B, R	B, R	R		Big Stony Creek	B, R	R	R	
Big Fox (Upper)	R, Bn	R, Bn	R, Bn	R		SHENANDOAH COUNTY				
Big Fox (Lower)	R, Bn	R, Bn	R, Bn	R		Passage Creek	B, R, Bn	B, R, Bn	R	
Elk Creek	R, Bn	R, Bn	R, Bn	R		Big Stoney Creek	B, R, Bn	R, Bn	R, Bn	R
Peach Bottom Creek	B, R	R	R, Bn	R		Cedar Creek	B, R	B, R	R	
Helton Creek	R		R	R		Mill Creek	B, R	B, R	R	
Hales Lake	R	R	R	R		Paddy Run*	R	R	R	
GREENE COUNTY						Peters Mill Creek*	R	R		
Lynch River	R	R	R			Tomahawk Pond*	R, Bn	R, Bn	R, Bn	
South River	B, R, Bn	B, R, Bn	R, Bn	R		Little Passage Creek*	R	R		
Swift Run	R, Bn	R, Bn	R			Cedar Creek (upper)	R	R		
HENRY COUNTY						SMYTH COUNTY				
Smith River (Philpott)	B, R, Bn	R, Bn	R, Bn	R		S. Fork Holston River Gorge*	R, Bn	R, Bn	R, Bn	R
Smith River (Bassett)	R	R, Bn	R, Bn			S. Fork Holston River (Lower)	B, R, Bn	R, Bn	B, R, Bn	R
Smith River (Koehler)	R	R, Bn	R, Bn			Big Laurel Creek	B, R	B, R	B, R	
HIGHLAND COUNTY						Staley's Creek	B, R	B, R	R, Bn	R
Bullpasture River	B, R, Bn	B, R, Bn	R, Bn	R		Middle Fork Holston River	R, Bn	R, Bn	R, Bn	R
Potomac River (S. Fork)	B, R, Bn	R, Bn				Comer's Creek*	R	R	R	R
Jackson River	B, R, Bn	R, Bn	R, Bn	R		Hurricane Creek*	R	R	R	
Back Creek	B, R	B, R	B, R			Cressy Creek*	R	R	R	
LEE COUNTY						Dickey's Creek*	R	R	R	
Martin's Creek	B, R, Bn	R, Bn	R	R		TAZEWELL COUNTY				
Powell River (N. Fork)	B, R	R	R	R		Wolf Creek	R, Bn	R, Bn	R, Bn	R
MADISON COUNTY						Cove Creek	B, R	B, R	B, R	
Garth Run	B, R, Bn	B, R, Bn	R, Bn			Laurel Creek	B, R	R		
Hughes River	B, R	B, R	B, R			Roaring Fork	B, R	B, R	R	
Robinson River	B, R, Bn	B, R, Bn				Little Tumbling Creek	B, R	B, R	R	R
Rose River	B, R	B, R				WARREN COUNTY				
MONTGOMERY COUNTY						Gooney Run	B, R, Bn	B, R, Bn	B, R, Bn	
Poverty Creek*	R	R				WASHINGTON COUNTY				
Craigs Creek*	R, Bn	R, Bn				Whitetop Laurel (Upper)	B, R, Bn	R, Bn	R, Bn	R
Roanoke River (S. Fork)	R, Bn	R, Bn	R, Bn	R		Whitetop Laurel (Lower)	B, R, Bn	R, Bn	R, Bn	R
NELSON COUNTY						Tennessee Laurel	R, Bn	R	R, Bn	R
Tye River	B, R, Bn	B, R, Bn	B, R, Bn	R		Green Cove Creek	B, R		B, R	
Tye River (N. Fork)	B	R				Big Brumley Creek	B, R		B, R	
PATRICK COUNTY						Big Tumbling Creek	B, R	B, R	B, R	R
Dan River (below Powerhouse)	R, Bn	R, Bn	R, Bn	Bn		Valley Creek	R		R	
Dan River (above Powerhouse)	B	B	B			Straight Branch*	R	R	R	
Rock Castle Creek	B, R	B, R				Beartree Lake*	R	R	R	
Round Meadow Creek	B	B	B			WISE COUNTY				
Mayo River (N. Fork)	R, Bn	R				Middle Fork Powell River	B, R	B, R	B, R	R
Mayo River (S. Fork)	B, R	R, Bn				Mountain Fork*	R		R	
Poorhouse Creek	B					Burns Creek*	R		R	
Big Ivy Creek	B, R	B, R				Clear Creek*	R		R	
Ararat River	B, R	R, Bn	Bn			Bark Camp Lake	R		R	
PULASKI COUNTY						WYTHE COUNTY				
Peak Creek (W. Fork)	R, Bn					E. Fork Stoney Creek*	R	R	R	
ROANOKE COUNTY						Gullion Fork Creek*	R	R		
Roanoke River-Roanoke	R, Bn	R, Bn				West Fork Dry Run*	B	B	B	
Tinker Creek	R, Bn	R, Bn	R, Bn			W. Fork Reed Creek*	R	R	R	
Glade Creek	R, Bn	R, Bn				Gullion Fork Pond*	R	R		
Roanoke River-Salem	R, Bn	R, Bn	R, Bn			PRINCE WILLIAM & STAFFORD COUNTIES				
ROCKBRIDGE COUNTY						Quantico MCB	R, Bn	R, Bn	R, Bn	

popular during recent seasons, partially because salmon egg prices have soared, but more importantly because, for some reason, it catches trout. The trout don't seem to mind that it can give them a good case of indigestion. Try using one to three kernels on a hook.

Worms, ranging from the garden type to red wigglers to nightcrawlers, have been a popular bait since well before the days of processed salmon eggs. They can be particularly effective when the water is colored following a rain. Hook them one or two times to give a natural appearance, rather than balling them up on the hook.

Cheese also can be productive, especially the Velveeta type, which easily can be moulded into a ball on your hook. The cheese will harden some once it hits cold water, a fact that improves its hook-holding qualities.

Some of the most skillful and successful bait fishermen will avoid junk food and select natural bait. Small minnows and hellgrammies are examples that trout often will pounce on while snubbing their noses at other offerings.

As far as artificial lures, few are more enticing to trout than small spinners or fly-and-spinner combinations. Good examples are the Panther Martin, Rooster Tail, Cottontail, Mepps and Joe's Flies. They offer a flash and vibration that seem to compel a response from some instinct deep within a trout. A range of 1/64th, 1/32th and 1/16th ounce lures in a variety of colors and designs is a good choice.

These should be fished slowly, working them deep into the pools and into the pockets and riffles. Always make certain that the blade is spinning freely.

One advantage is that you can cover considerably more water with

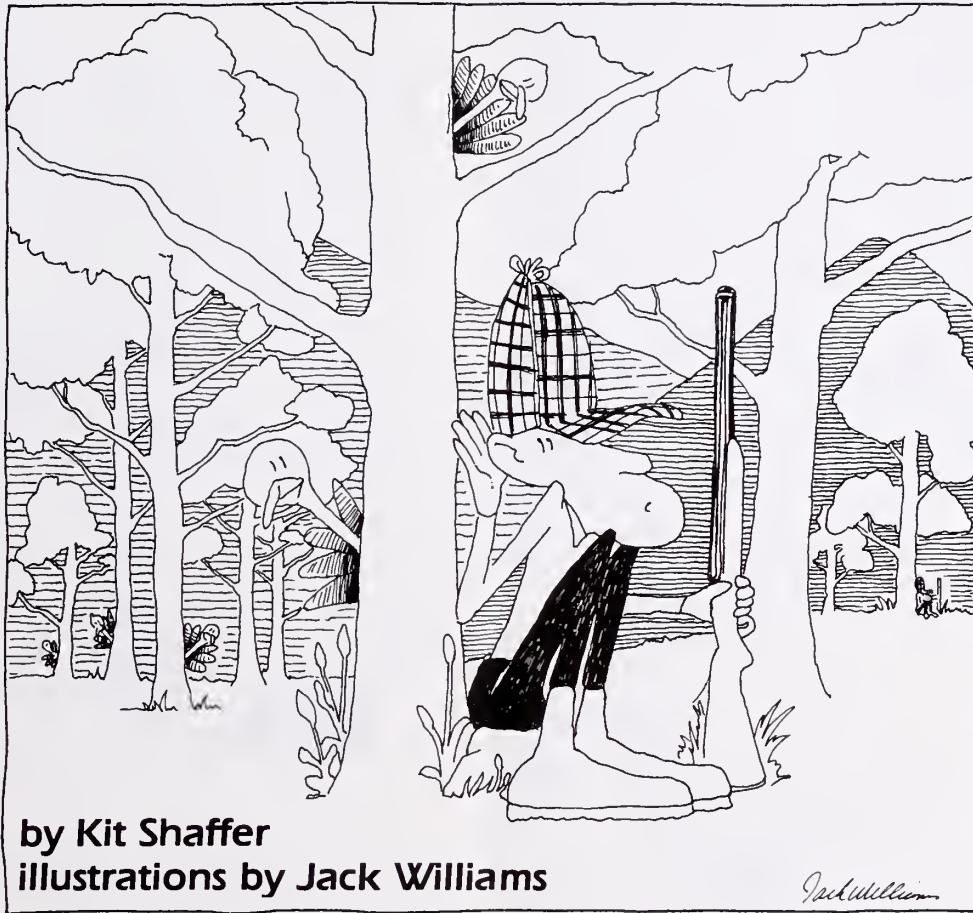
spinners than with baits during the same time period. Cast them upstream and allow them to wash with the current, giving them just enough action to keep the blade throbbing. Spinners can be especially rewarding when the trout have scattered. One problem, though, if the stream you are fishing is crowded is that spinner fishing can cause considerable disenchantment by tangling the lines of other fishermen.

The best way to avoid crowds opening day and during in-season stocking periods is to travel to streams as far away from major population centers as possible. Another trick is to journey upstream when you hit a creek or river, with the knowledge that many anglers will stop off in the lower reaches. But competition is a part of fishing for stocked trout. You simply have to learn to be a little smarter than your fellow angler—and the trout. □

Lightweight spinning outfit allows trout to give a good account of himself.



Tricks for Stubborn Gobblers



by Kit Shaffer
illustrations by Jack Williams

Jack Williams

**Persistence and a few tricks up
your sleeve mean the difference between
bagging a turkey and going home empty-handed.**

When Virginia's first spring gobbler season opened in the early 1960's, I was confident that the gobbler hadn't been born that I couldn't call into shooting range. Through the years, however, apparently conditions have changed: each spring I now encounter reluctant, hard-headed gobblers that I can't work. Perhaps through generations of attempting to survive, the toms have adapted and have become more skilled at avoiding turkey hunters' imitation hen calls. Of course, it may be, as my hunting companions have suggested, that as I age I have gradually lost some of my calling abilities, or—Lord forbid—my sex appeal!

As every spring gobbler hunter will soon discover,

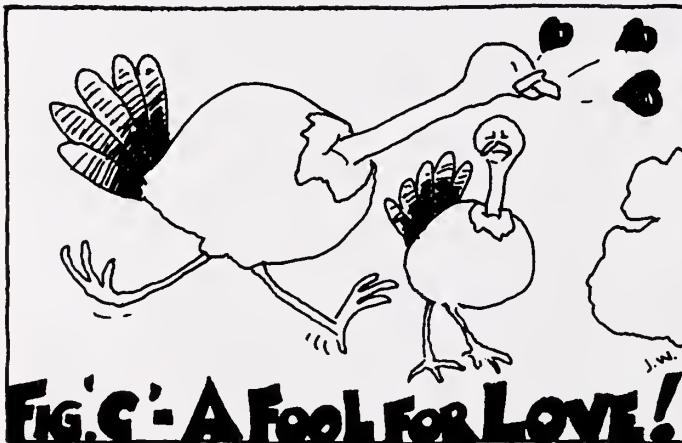
each turkey tom we encounter is an individual, a distinct entity. Like hunters themselves, each turkey has a unique blend of characteristics—"personalities," if you will. One is verbose, while another is the strong, silent type. One is reckless, another extremely cautious. One is foolish—or downright stupid—while another is wily, even brilliant. Some toms appear to be over-sexed, others act like they suffer from the proverbial "headache." Some gobblers respond to one type of call while rejecting another. It is thus impossible to prescribe a fool-proof technique for calling every gobbler in the turkey woods. To be successful, spring gobbler hunters should, through trial and error, gradually accumulate bags of tricks which will enable them to out-maneuver particularly

stubborn toms.

Of course, if we turkey addicts were able to call up and harvest every gobbler available, the sport would no longer be such a thrilling and challenging experience. In the following paragraphs, I have outlined a number of techniques that have worked on occasions; but don't bet your next paycheck that they will be successful on every turkey.

The most difficult of all gobblers to call up are those fortunate toms who have accumulated a harem of hens. There's no reason in the world (unless the old boy is over-motivated or greedy) for him to leave his steady girlfriends to seek out other prospects. On numerous occasions during my 600-plus mornings of spring gobbler observations, I have noted the indifferent reactions of gobbler "shieks." Most of the time they will not even bother to respond to an imitation call. Sometimes a tom will gobble every 15 minutes or so and then gradually move out of the territory. Later in the season, after the hens have left the gobblers to incubate their eggs, the toms are still motivated and then will respond more readily to hunters' calls. Frequently, when you have a gobbler fooled and approaching your hiding place, a hen will enter the arena. Invariably the old boy will shut up and depart the area with his Bo Derek. But don't give up: remain motionless and continue to call. Occasionally the big tom will return to your exact location later in the morning. Patience is not only a virtue, it's essential in turkey hunting.

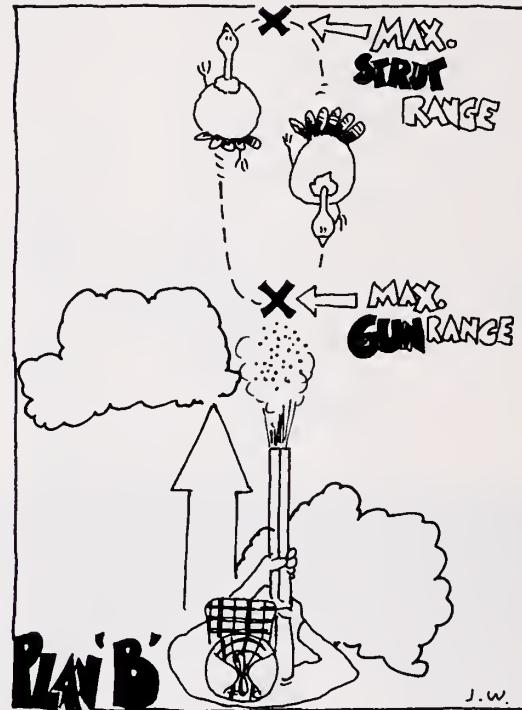
A neat trick that will sometimes work with a reluctant gobbler is to leave him completely. If the tom has answered you for several hours and has not moved any closer, and you can ease away from him without being



detected, sneak away from him into a new territory. Later in the morning, return to your original calling location. As often as not, conditions will have changed, (perhaps the hens have left the tom), and he will then respond to your calls. However, if you are in a heavily congested area where there are numerous competing sportsmen, this technique is questionable. Somebody else might collect your big bird while you are gone!

Another ruse that has often paid dividends for me is to simply stop calling. For example, you are attempting to work a stubborn tom who responds to your calls but refuses to move a step closer. Stop calling completely and

wait for an hour or more without touching your yelper. The old boy will likely become panicky and curious and rush forward to find out what has happened to his potential girlfriend. One delightful morning in Appomattox County, we tried this method on a particularly hard-headed tom; he almost tore down the woods running toward us, frantically calling on every step. Unfortunately, my hunting companion missed him, but we had a wonderful time calling up the tom without calling!



A simple expedient which will often bring you delayed results from an uncooperative gobbler is to change your callers. On many occasions we have had toms stand within sighting range, but out of gun range, and refuse to move any closer. When we changed yelpers the gob would immediately change his tactics and come to the different call. I usually carry four or five different callers in my hunting coat to be used on such an occasion. I like to experiment with the old boy when I first hear him by trying a variety of yelpers and calls. It soon becomes obvious which of the calls really turns him on. One morning in Amherst County, I talked to a gobbler for over three hours. This character gobbled so many times that I got bored, but he steadfastly refused to come to us. I changed from a cedar box to a wing bone-rubber tube-cow horn yelper and five minutes later he was in our laps!

There is another ruse to use on gobblers if the situation is perfect and there happens to be a road or path convenient to your calling position. Often turkey toms have a fixed routine for strutting and gobbling in their territories. A typical gobbler routine: He gobbles and approaches, but before coming within gun range, he turns and struts directly away from your hiding place.

He proceeds down the ridge strutting and gobbling, then returns and repeats his waltz through the woods. When you ascertain he has reached the opposite end of his strutting range, move cautiously forward and await his return. Should you have a hunting buddy, send him to greet the old boy on his return trip.

We have often been successful by using the same trick in reverse on cantankerous old gobblers. Leave your hunting companion and cautiously move away from the tom, calling as you retreat from the area. With any luck, the gobbler will then follow you—only to be “bush-wacked” by your buddy.

Toward the end of the spring gobbler season you will likely encounter a large fellow who has previously been pursued, fooled and even shot—and often. It is only natural that the tom has become extremely nervous and “hen-shy.” I refer to these old gobblers as “chicken” or “reluctant lovers.” Invariably they gobble, then run in the opposite direction. They are the original ridge runners. You might think that you are working that mature tom because he responds to your calls. But the next time you hear him, he is at least a mile away, behaving as if he were in training for the summer Olympics. The only option left for you is to try to run after him and “head him off at the pass.” If you are fortunate to have roads or trails available, you might be able to run (carefully) ahead and overtake him. The largest gobbler that I have ever weighed (23½ pounds) was collected on Quantico Marine Base by a hunter who practiced this technique successfully.

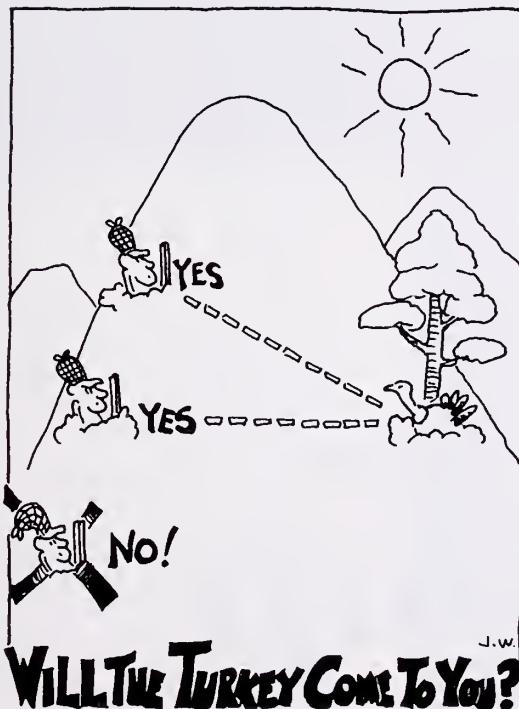
There is a trick which most springtime hunters use when chasing gobblers in the hills and mountains. For some unknown reason, turkey toms seldom come down a mountain to your calls. They move up into the hills, but rarely down. They might answer your calling all morning long, but usually you are wasting your time and the

gobbler's. You've heard the expression about Mohammed and the mountain? It applies here. When the high-in-the-hills gobbler won't come down the mountain, the hunter must climb the mountain to get results. If you find that you and your tom have reached an impasse, retreat cautiously, trying not to be detected by the gobbler until you are out of his sight. You should then circle the turkey's range, climb the mountain, and try to arrive above or on the same level with your adversary. Now it's a brand new ball game, and he will usually respond favorably to your call.

A number of years ago we worked on the same stubborn gobbler for five mornings on No Business Mountain in Bedford County. The place is aptly named: it was so steep and rugged that we had no business hunting there. This tom gobbled with enthusiasm every few minutes, but positively refused to come over to our adjacent ridge. I finally realized why: it was impossible. The entire valley between us had been clear cut several years before. There was a jungle of vegetation between us that the gobbler couldn't have penetrated unless he were driving a bulldozer! He could have flown to us, but refused to oblige. On the last day of the season, I finally figured out how to outsmart him. It required nearly three hours of steady climbing to the top of the mountains. I eased down into the sacred territory of that reluctant fellow and called several times. It wasn't long before he came strutting up the mountain to me with his guard down.

One of the most interesting and exciting mornings I have ever spent gobbler hunting occurred in picturesque Highland County. Three of us were searching for gobblers on a farm near Blue Grass where the fields were grazed by sheep and the fences were all made of ancient split chestnut rails. Unfortunately there were no gobbling gobblers that morning in our hunting territory, but across a valley high up in the mountains, there were three gobblers serenading us constantly. As luck would have it, those large birds turned out to be in neighboring West Virginia. We had neither West Virginia hunting licenses nor permission to hunt in that territory. In order to keep everything legal, we gradually snuck up that steep mountain, keeping on the Virginia side, until we were located above those out-of-state tom turkeys. Would you believe that all three of those large birds responded to my calls, and flew together to our side of the mountain? Five minutes before quitting time (11:00) one of my buddies legally collected a West Virginia gobbler.

There are some reluctant tom turkeys that regardless of the ruses and tricks you use on them, will never approach your calls. My favorite gobbler of all time was a tremendous patriarch who made his headquarters near Leesville Reservoir. We named him “Old Blabber-mouth” for obvious reasons. He had a unique, three-part gobble. He was on the same ridge year after year, gobbling to his heart's content. Most of the avid turkey chasers in the territory pursued him, trying every legal hunting method, spring and fall, for over eight years—but no one could get a shot at him. Finally, one morning during a rainstorm, I called him within a dozen steps, but somehow I couldn't force myself to pull the trigger of my double barrelled shotgun. I had become so attached to that bird, and he had provided us with so many hundreds of hours of exciting recreation, that I could not force myself to shoot him when I had the opportunity! The moral of this true turkey tale is that it is not always necessary to harvest a gobbler to enjoy this delightful springtime tradition! □



You can rely on the calendar to tell you when spring begins, but we prefer to watch for the time-honored natural signs that herald its arrival.



Michael P. Gadomski

Wood Frog

Spring in the Swamp



by Gregory Mertz

According to the astronomers, the arrival of spring is but an instant. On March 20th at 11:30 p.m., the earth will position its equator beneath the sun, and bingo! it's spring. So the astronomers tell us, anyway.

But for me, the arrival of spring has always been a gradual thing, a process that begins in fits and starts. Winter and spring perform a sort of dance—first one taking the lead, now the other, and back again. It's almost a foreshadowing of the courtship rituals which will mark the season to come. Finally, one day, spring takes over for good, and there's no going back. Before this happens, however, certain things must occur.

Some people look for robins, flocks of geese or crocuses. But I do not trust these as sure signs of spring. I have seen robins around all winter long, geese that fly south in the spring and crocuses that bloom in the fall. Instead, I rely on a sequence of events, proven cues to the arrival of spring: a windy day, suitable for kite flying; thawing ice and snow that leave muddy puddles and rivulets, perfect for sailing a stick-boat in; and by far my favorite, the nighttime courting parties of the frogs, salamanders and toads, calling me to my annual wanderings through woodland swamps.

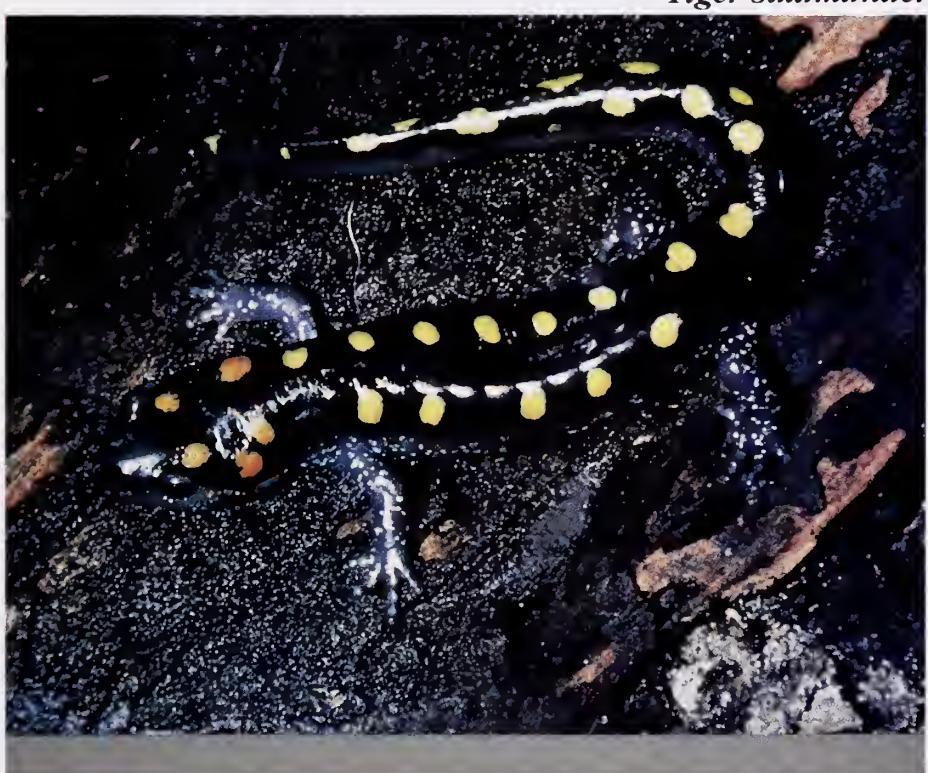
Sometime during the first warm night rains, many of the amphibians, acting on cues of their own, begin to stir out of hibernation. Their first responsibility (or is it desire?) is to head into the swamps where they mate and lay eggs to insure the continuation of their race. And when the amphibians take to the swamps, so do I.

What happens then is a celebration—almost a party, it seems. The invitation list includes spotted salamanders, wood frogs, peepers, American toads, spotted newts, green frogs, and many others. The party goes on throughout the spring, different species attending at different times. I go early because I am anxious for spring to begin; but I am not the first to arrive. By the time I get there, three species are stirring—the spotted salamanders, the wood frogs and the spring peepers. These three species are active for several weeks so I get to see all of them on the night I arrive.



Red Eft

Michael P. Gadomski



Tiger Salamander



Michael Gadomski

Gray Treefrog

Once a year, I choose a warm night near the beginning of the season, don my hip boots, arm myself with a flashlight, and wade out into the swamps.

The spotted salamanders are usually the first to arrive, sometimes as much as a week before I do. They swirl about in the icy water trying to attract the attention of one another. Their figure-eight dance, with their yellow spots flashing in my spotlight beam, is a colorful courtship ritual.

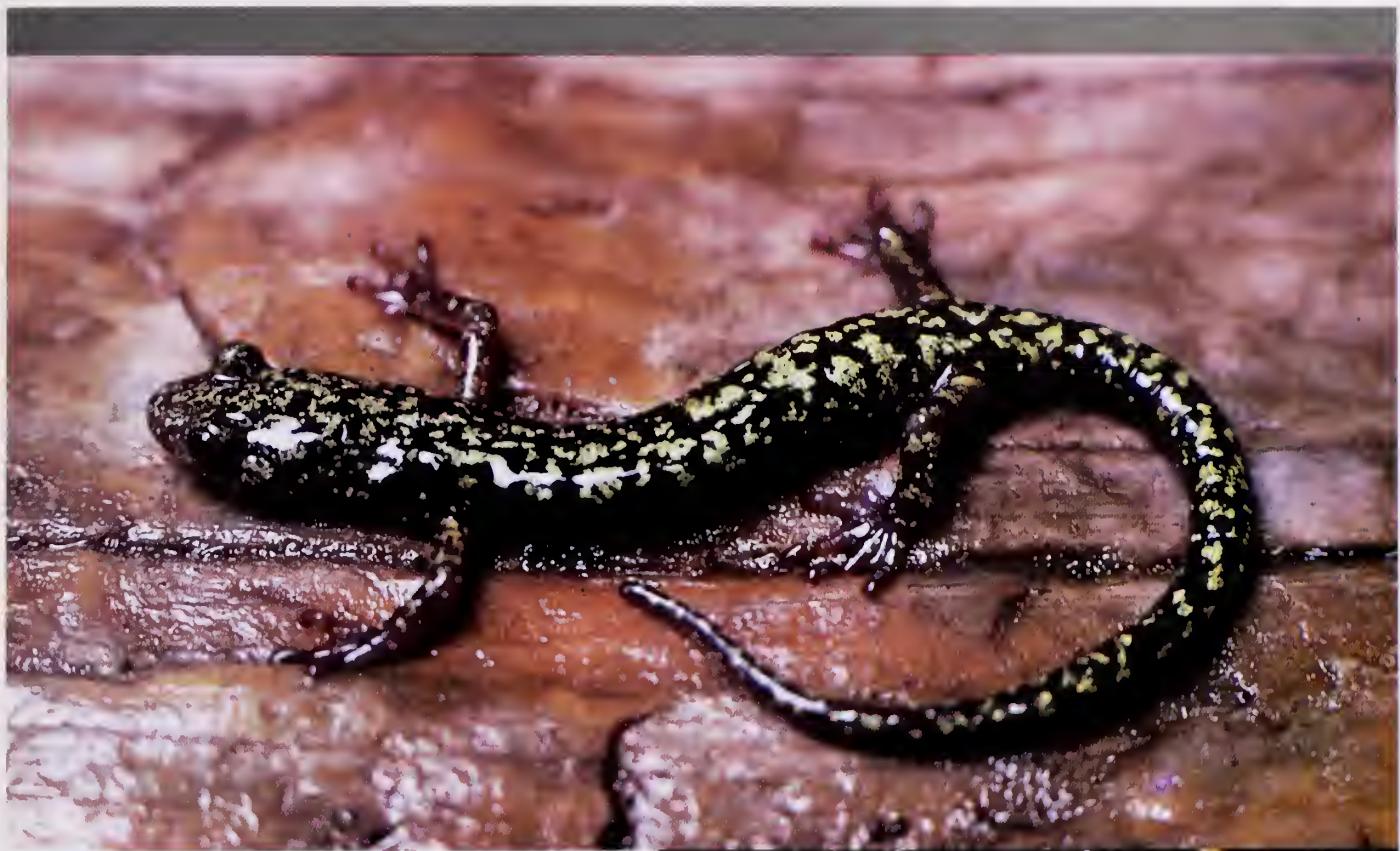
The male wood frogs arrive a day or two later. They begin to croak to the females to follow. Even after I arrive, many of these females are still in the woodlands. A female arriving in the swamp swims towards the croaker of her choice. On sighting an approaching female, a male wood frog abandons his post and swims to meet her.

"Outside, life has begun again and I feel renewed."

Seeing in a dark, murky swamp is difficult. A male frog, hardly a discriminating lover, sometimes makes mistakes and grabs a passing male. The offended frog squeals his disapproval. The aggressor hurries on. The cue for the release is the squeal—no squeal, no release. The females are non-vocal, so the species continues, year after year. Mistakes are made, however. Several years ago I saw a male wood frog valiantly holding onto a male spotted salamander who was swimming about trying to carry out his intricate courting dance. The salamander, member of a dumb race, could say nothing to this frog who believed that silence is indeed golden.

The peepers arrive a day or two before I do. They are a rowdy bunch. In fact, it is their high-pitched *chirrup* that tells me it is time to attend. These nickel-sized tree frogs are so loud that they can sometimes be heard over a mile away calling to their potential mates.

Each of these three species spend only a few weeks in the swamp each



Green Salamander

Cricket Frog



Oak Toad



Lou Hinshaw



Michael Gadomski

Egg Mass—Spotted Salamander

year as adults. They return to the surrounding woodlands where they search for and eat insects, grubs and worms. Their eggs remain, hatching a few weeks later into tadpoles. These tiny, fish-like creatures grow and eventually change into the adult forms which crawl or jump into the woodlands to follow the lifestyle of their parents.

Unlike the amphibians that I have come to watch, my foray into the swamp lasts only an hour or two. Wet and cold, but satisfied that winter cannot last, I return home to get warm and dry. There are still mile-posts to pass before the world is again green and alive, but outside, life has begun again, and I feel renewed, as well. □

What is the first sure sign of spring? Is it the first newborn animal? That would be the great-horned owl who often hatches during the first weeks of February when winter still grips the countryside. Or is it the first wildflower? The skunk cabbage blooms in mid-February, but even it is prepared to endure winter's hold. It can warm itself up internally and even melt away ice and snow.

These two events signal that the seasons will change, but do they evoke the ephemeral quality of spring's first event? If we were to listen to some of the great poets and naturalists it would seem that spring's first signs are as personal and varied those who observe them.

"Who shall say when one season ends and another begins? . . . To me spring begins when the catkins on the alders and the pussy willows begin to swell; when the ice breaks up on the river and the sea-gulls come prospecting northward."—John Burroughs, from *Leaf and Tendril*



"March 9, 1853, Minott thinks and quotes some old worthy as authority for saying, that the bark of the striped squirrel is one of the first sure signs of decided spring weather."—from the *Journal of Henry D. Thoreau*



*"To think to know the country and not know
The hillside on the day the sun let go
Ten million silver lizards out of the
snow!"*

—Robert Frost,
from *A Hillside Thaw*



"Surely one day a year might be set aside on which to celebrate our ancient loyalties and to remember our ancient origins. And I know of none more suitable for the purpose than the Day of the Peepers. 'Spring is come!' I say when I hear them."—Joseph Wood Krutch from *April in The Twelve Seasons*

GETTING•STARTED•IN *Fly Fishing*



*story & photos by
Gerald Almy*

*Finding your niche in the world of
flycasting need not be a drain on
the wallet or a test of nerves.*

Not long ago, fly fishing was equated almost exclusively with trout fishing. Oh, there were a few isolated bass buggers quietly plying the weed-choked lakes and swamps of the South. And in saltwater, a handful of pioneering anglers were catching enormous fish on the long rod off Florida's coast. But to the large majority of the angling and non-angling populace, fly fishing meant trout fishing, pure and simple.

And it not only meant trout fishing, it meant a rather stuffy, pompous form of trout fishing by a pipe-puffing gentleman in neatly-dressed tweeds and a dapper derby hat decorated with hand-tied Orvis flies. You never really knew whether this fellow with the firmly-set jaw and smug countenance caught anything, but at least he looked the part of the "distinguished angler" who fished *only* with flies, *only* for trout.

Those who dared try to raise themselves out of the depths of spin or baitcasting and enter this aristocratic world of the fly fishing elite took a deep gulp of air, plopped down a cool half grand for a split Tonkin cane rod, silky fly line, reel with butter-smooth drag, leader as long and fine as a damsel's hair, and a dozen or two exquisitely-tied mayfly imitations.

Decked out in jauntily-cocked hat and other vital accouterments, he was ready. Off to the stream the newcomer to fly fishing marched. A trout stream, of course. Preferably a difficult limestone stream steeped in legend and tradition and chock full of difficult, wary browns, the most demanding trout of all. Nothing but the best for our newly-converted fly fisher.

But what did the neophyte find on the hyaline trout stream?

Frustration. Pure and simple.

He labored just to punch out a big enough cast to get his too-long leader beyond the guides of the rod. Backcasts dropped predictably, costing him dearly as those \$1.50 flies snagged on streamside shrubbery, snapping the thread-thin tippet with unnerving regularity.

Those few trout that he didn't spook as he lumbered up to the stream might take a critical glance at his fly before shaking their heads in contempt and sinking back into the depths. Even if one did prove gullible enough to suck in his counterfeit insect, chances are it either spit the fly back out before he set the hook or



Sam Slaymaker with a bluegill caught on the Shenandoah River on a fly.

snapped the novice's leader with a quick burst of muscle—the final frustration to cap off an exasperating day astream.

Eventually, over countless trying trips, this angler might have found his niche in the world of fly fishing. But for every one that did in years past, countless others no doubt dropped out of the sport entirely, casualties of myth and misunderstanding. Many others probably never even

took up the long rod because of their fears and apprehensions that it was just too difficult.

Fortunately, the scenario described above is not nearly as common today as it was 10 or 20 years ago. Fly fishing has entered a new age, with drastic improvements in tackle that make casting easier and new flies that fool more fish. Most importantly, though, fly fishing has freed itself from its image as a hoity-toity type of angling

for trout fishermen and experts only. It's now attracting thousands of just-plain-old-average anglers who are learning that this is a fun and relatively easy way to catch fish.

The new converts are learning that you don't need an acrobat's dexterity and a physicist's understanding of aerodynamics to flick a fly out and hook a fish, that fly fishing doesn't have to be any more expensive, complicated or difficult than other forms of fishing. They're also learning that fly fishing is one of the most deadly angling methods of all for catching a wide variety of gamefish.

Lefty Kreh, of Cockeysville, Maryland, has done as much to demystify fly fishing and promote it as a sport for Everyman as any person alive. Kreh, outdoor editor of the *Baltimore Sun* and former fishing editor of *Outdoor Life*, says fly fishing is nowhere near as difficult as most novices believe.

"I've been teaching fly casting for about 25 years. I've only met two people in that time who couldn't learn to fly fish, and they were totally uncoordinated. I think it's far more difficult to become a really good spin caster than to master fly casting. It really doesn't take long to become very accurate with fly tackle out to 40 to 50 feet."

Neither, says Kreh, is fly fishing prohibitively expensive. Forget about the split Tonkin cane rods, which can cost as much as \$1,000. "Several good glass fly rods today cost \$40 or less. You can get a decent reel for \$25. The line costs about \$20. So for less than \$75, you can get a total outfit. Another \$25 for flies and leaders and the investment comes to less than \$100."

But in spite of the ease of breaking into the sport and its modest cost, fly fishing aficionados claim that their sport *does* offer a special appeal over other forms of angling such as baitcasting, canepoling and spinfishing. With its rhythmic, fluid motions it seems to epitomize the beauty, grace and smoothness that fishing at its finest can mean. Even when you don't catch anything, fly fishing is fun.

Says Kreh, "If you throw out a plug with a baitcast or spinning rod, you've got to wind the lure all the way back in before you can cast it out again. With a fly rod, you don't have to go through all that cranking. A mere flick of the wrist and the fly is back. The fact that the line unrolls in a relatively slow manner lets you watch it in its flight. You can evalu-

ate and enjoy the cast more that way.

"Fly fishing to me is like shooting your bow and then not having to walk to go get your arrows. Every time you cast, the line comes back to you and you can do it all over again."

But grace and beauty aren't the only attractions of fly fishing. It also catches fish. For many types of angling in Virginia, the fly rod in the hands of a good angler will produce more fish than either baitcast or spin fishing gear. This refutes another common misconception about the sport: i.e., that it's harder to fool fish with flies than lures. The fly rod allows a quieter delivery and less time wasted in unproductive water during retrieves. It permits the use of highly realistic food imitations, and life-like presentation, whether that means suspended at mid-depths, scuttling along the bottom, or twitching on the surface. Fly fishing gear offers better hook-setting capability and more leverage for fighting the quarry, once hooked.

But to enter smoothly and painlessly into the world of fly fishing, you should do it differently than the fellow described earlier in this article who spent hundreds of dollars on refined, but inappropriate gear and

then ventured out without preparation to try his fledgling skills in the most difficult situation of all—a limestone spring creek inhabited by wily brown trout.

A much better alternative is to start with panfish such as bluegills, redbreasts, rockbass, crappie, and, if they come your way, bass. The reason to start with these quarries is that they are forgiving. Trout, particularly brown trout, are not. With panfish and small bass, you can wade a little bit sloppily, or step a little too heavily on the water's edge and they won't flee for the next county. You can use tippets strong enough that you don't snap them every time you set the hook. You can be a trifle slow reacting to strikes and still find your finned friend holding onto the fly.

I've introduced a number of people to fly fishing on the Shenandoah River, where rock bass, redbreasts and small bass are so abundant and willing to take a fly. All were catching fish within an hour; some pulled in a dozen or more during their first morning's session on the river. Many warmwater streams and rivers throughout the state offer a similar opportunity. Farm ponds are also great places to learn fly fishing, and



More and more anglers are learning to use flies such as these with success, thanks to improvements in tackle which have made casting easier and new flies that fool more fish.

the shallow coves of Virginia's major lakes can be good spots to start, particularly if you have a johnboat so you can get away from the trees and bushes that might snag backcasts on shore.

Before you hit the water, though, it's wise to read a book, booklet or few magazine articles on the mechanics and principles of fly casting. A few pointers at a casting pond or in your back yard from an experienced fly fisherman or a casting instructor will also help prepare you for your first fly-fishing trip. Another good option is to enroll in one of the fly fishing or fly casting schools offered. Harry Murray (P.O. Box 156, Edinburg, Virginia 22824, 703/984-4212) offers excellent courses. Others are occasionally held by Trout Unlimited chapters and fishing clubs such as the Fly Fishers of Virginia, based in Richmond.

To a certain extent, the type of fly fishing outfit you should purchase to get started in this sport will vary with the kind of fishing you want to do. It's not smart to fish a small brushy brook trout stream in Shenandoah National Park with the same fly outfit you'd use for stripers on Smith Mountain Lake, for example. But if you want one basic outfit to use on trout, small bass and panfish, start with a rod of 8 to 9 feet that is labeled for use with a 6 to 7 weight line. If you can afford \$50 to \$150 for the rod, by all means get a graphite model by a company with a proven track record. If you have to keep costs low, a fiberglass rod by one of these same companies will do just about as well. Forget the expensive split cane "bamboo" rods. I own a few, for tradition's sake, but I rarely use them anymore. Graphite has made the natural material outdated.

Buy a single action, lightweight reel made of aluminum or graphite. Forget automatics, which are heavy, hold little line and are difficult to play large fish on. Buy one floating line in the recommended weight as listed on the rod, in a weight-forward taper. Later, you may wish to purchase a spare spool for your reel and buy a sinking-tip weight forward line in the same size, for fishing deep water or heavy currents. But for starters, the floating line will do nicely. You can make your own leaders, but for simplicity's sake, buy a couple of knotless tapered leaders of 6 to 7½ feet, with tippets testing 3 to 8 pounds. Also buy a few small spools of 3- to 8-pound tippet material (the tippet is the last



Rockbass are a great quarry for the neophyte fly fisher.

end section of your leader, where the fly is attached).

For flies, buy a selection of streamers such as the Zonker, Marabou Muddler, Flashabou Muddler, Woolly Bugger or Scuplin, sizes 4 to 10. A few wet flies such as Woolly Worms, Black Gnats, and Coachman's, and nymphs such as the Tellico, Stonefly or Hellgrammite, sizes 6 to 12, should be added to your collection. Also pick up a handful of sponge rubber spiders and cork poppers, sizes 8 to 14.

With this selection of tackle and flies and a casting lesson or two from a friend or instructor under you belt, you're ready to hit the water. All day during spring, or in early morning and evenings during summers, concentrate on the shallows of coves, points, shoreline areas of rivers, eddies, weedbeds, logjams, lily pads and other "structure." Riffles and deep pools can also be good places to fish on rivers, especially with nymphs and streamers.

Strip out a small amount of line, shake it through the rod and guides and gradually work out a cast of 20-35 feet. There's no need to try for distance records on your first few trips. This is far enough to catch fish, provided you wade carefully or walk softly along the bank. In time, you

can gradually learn to fish further out, though you'll rarely find it necessary to fish more than 50 feet, even when you reach the "expert" status.

Drift nymphs, wet flies and streamers with the current in rivers and streams. Also try pumping them back in a short, spurting motion. Drop poppers and sponge rubber spiders to the water with a gentle splat near cover or along the shoreline, let them sit for a few seconds, then twitch them and wait. Repeat once or twice more, then make a back cast and deliver the offering to a new area.

Within half an hour, chances are good you'll be drawing strikes. There's no reason at all why you shouldn't catch several fish, maybe even a dozen or more, on your first fly fishing outing if you do a bit of advance preparation, buy a good, balanced outfit, practice casting a few times in your yard, and start with a forgiving quarry such as panfish or small bass. Once you've built up your skills with these species, then you can buy a few dry flies to add to your collection of nymphs and streamers and you'll be ready to break into the sweet, distracting world of fly fishing for trout. □

by Janet Shaffer
illustrations by Cindie Brunner



Fragments of History

The promise of finding
traces of the past is luring amateur
archaeologists to the artifact trail.



Archaeology is the high-sounding name for a hobby that can be just what the doctor ordered—fresh air, lots of walking, and relaxation. It is ideal for the “loner” who wants to escape noise and people, or as group recreation for friends and families.

Call it artifact collecting, “arrowheading,” or more formally, archaeology; whatever you call it, it is a pastime that appeals to an increasing number of people who find adventure in picking up fragments of history that may be many thousands of years old.

How does one begin? Blessed with a keen pair of eyes, (contacts or prescription glasses), you can quickly learn to distinguish delicately flaked arrowheads, tools, weapons, and other miscellaneous artifacts from the unworked stones and rocks found in almost any open field.

Where to look is one of the first questions asked by most beginners who are interested in becoming amateur archaeologists, but who lack know-how and experience. The answer is somewhat ambiguous. Searching for Indian relics can be likened to the search for a pot of gold at the end of a rainbow. They can be found in unexpected places—even your own back yard, or again, in familiar territory where you have hiked before, but never really looked for what might lie beneath your feet.

The best hunting grounds are usually plowed or disked fields before planting. We have had the best luck in areas where a river or smaller body of water flows somewhere in the vicinity. Indians established camps within walking distance of water.

In mountainous country, they tended to carry on village activities in higher elevations. Uplands provided open surveillance of surrounding territories as well as such superior advantages as drainage and defense. Some of our most successful finds during family forays have been on the tip-top surfaces of high plateaus, especially after heavy rains. Experienced artifact collectors know the wisdom of waiting for healthy downpours before searching; rain washes other hidden objects free of dirt and field debris and sometimes helps bring hidden treasure to the surface.

This is true not only of points, tools and common weapons, but of pottery fragments (sherds), as well. Some collectors specialize in searching mainly for pottery remains which have a fascination all their own. If a cluster of sherds is found within a small area, it is sometimes possible to glue the pieces together to form at least portions of a former pot or similar vessel. Remember that a large concentration of pottery sherds is a fairly sure indication that a village once occupied the site, and that it is a likely area to search for garden implements, arrowheads and other miscellaneous artifacts.

Let's assume that you are enthusiastic about doing your own searching, but you are not certain how to look. If possible, go with an experienced collector the first time or two so you may learn where to look, how to observe more carefully, and the basic rules and ethical behavior which should govern an amateur's attempts at collecting.

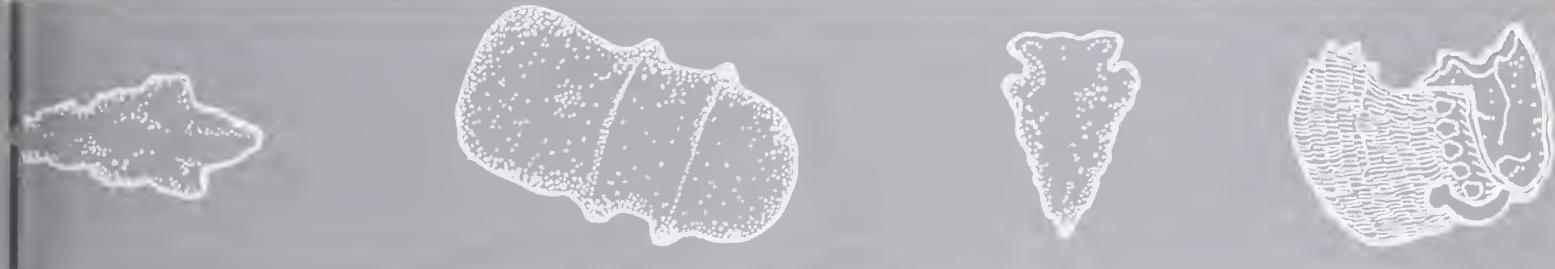
Once you have located a promising area, the next step is to get permission from the landowner to trespass on his property. This may necessitate your explaining your newly-acquired interest in amateur archaeology, and your promise to respect his property rights.

Usually a landowner will give smiling approval and free reign to explore—that is, until he plants his crops. Some farmers will even permit you to search in their fields after such crops as corn have sprouted and are clearly visible. Naturally, you should be careful not to trample the young seedlings, walking only between rows which are unplanted.

The elation of discovering an artifact, the remains of an earlier civilization, carries with it certain responsibilities. The first of these entails keeping an accurate record of the location in a given field where the artifact was found, with the date, county and state. A pocket-sized notebook is ideal for this purpose, and your jottings can be transferred later to a more permanent file. Also later, with additional research of your own and help from an experienced archaeologist, you can learn more about the particular Indian tribe which inhabited the territory, the age of the relic, and other important archaeological data which should accompany your finds. In other words, the amateur, as well as the professional collector, should respect and practice the rules and guidelines which govern the science of archaeology.

“**C**ollectors who amass relic collections share and inherit the conservation duties and obligations of the landowners,” writes Col. H.A. MacCord, a respected and life-long archaeologist from Virginia. “They are temporary custodians of bits of history, and have no right to destroy the data they hold in trust, nor to separate artifacts from their data as to source, age, and other vital details.”

He further states that when people buy, trade, give, or sell relics without also transferring the data on the objects, they betray that trust. He reminds amateurs (defined as part-time archaeologists who want to increase their knowledge and follow professional standards, but whose intent is enjoyment, not personal gain or profit), that when a relic is taken from its original site, with no effort made to record information about its location, that the finders give non-professional archaeology a bad name.



Let's talk about the relics themselves, the types, brief descriptions, and general use. Only the most common can be dealt with here, but through research and reading, you can learn to identify many others.

The term artifact is often used incorrectly. Many use the word in referring only to arrowheads (small pointed projectiles usually measuring up to an inch in length, and used in conjunction with a bow). Actually, "Indian artifact" refers to all the remains of native Americans.

In addition to arrowheads used for hunting and tribal warfare, there were awls and drills used for such purposes as puncturing holes in moccassins and clothing, or for a wide variety of other tasks, including drilling through stone, bone and other substances. Stone axes were devised to serve as weapons—to kill game and attack enemies, in addition to other uses. Among the various types were grooved, "half-grooved," polished or rough surfaced celts, and tomahawks. Celts, which are ungrooved, were sometimes miniature (as small as two inches long), ranging to seven or more inches long and half as wide.

Knives were indispensable in village life and as warrior's weapons. Both men and women used them for skinning animals, cutting up food and shaping other tools, among other tasks. Hammers or mauls, among the cruder of Indian relics, pounded food, rocks, and other materials and were some of man's earliest and most common tools.

Less common, and more difficult to identify, are chisels, wedges, gouges and picks; all may have been used interchangeably for some purposes. Actually, a gouge is a chisel with a curved or hollowed edge, and it is thought that some gouges could have been stone versions of shell blades. Certainly, they were good cutting tools. Picks, which are usually thought of as digging implements, in some cases resembled fist axes and in some areas were also used for cutting.

Even less easy to identify and categorize were the drills, reamers, punches, and gravers which are tool points of a sort. It is thought that much drilling was done by rotating by hand, sometimes with the help of abrasive sands or powders, or with such additional mechanical means as a bow, loose cord, and a drill shaft. Gravers were probably used for scratching lines and grooves, which may have served as crude drills.

Large numbers of all or some of the above-mentioned artifacts have been discovered by amateur or professional archaeologists along beaches and island shoreline as well as in mountainous or other upland regions. In fact, many collectors confine their searchings to beach combing, combining two hobbies or interests—a love of collecting and proximity to boats and water. Storms con-

tinually uncover relics on island and coastal shorelines, as the water level drops and rises periodically, thus providing new hunting territory for the searcher, according to the tides and the season.

Wherever these remains from the past are found, the serious or even occasional artifact者 reacts with enthusiasm and a trace of awe.

"When I found my first honest-to-goodness arrowhead in my rose garden, just by chance," says one collector from Tennessee, "I was hooked. I've been searching for half-buried treasure ever since."

She has a collection of over 3,000 projectile points, stone axes, hammerstones, and other artifacts, all artfully displayed in her game room. Her findings are all classified by source and other data, with some arranged on boards of various sizes forming Indian motifs. A number hang as wall decorations, while tools, weapons and other relics are stored in cabinets.

While many amateur archaeologists, like the Tennessee collector, confine their artifact hunting activities to surface findings, others consider it a waste of time. They prefer to participate in digs carried out by archaeological organizations in many states. You do not usually have to be a member to join the dig group, but you will probably want to make it official. It's fun to swap information with other members with common interests, and through films, speakers and publications often produced by such organizations, you will further your education about native Americans and their relics. To join an archaeological organization, write to your state capital. If no branch has been established in your area, ask for information about joining the state society.

If you hear about a dig and want to participate, get in touch with the archaeologist in charge for directions to the site and other instructions. Your entire family can help in the dig, moving bushels of dirt, washing artifacts, and various other tasks. Make it an all-day outing. Don't forget to take along a worker's lunch and a supply of fluids. Fresh air and digging inevitably create healthy appetites. What to wear? Be sure it's washable, comfortable and suited to the season.

Advanced archaeologists usually explain excavation procedures for beginners. Learning by doing under the supervision of experienced diggers will qualify you as an archaeological field worker in time. You will learn almost immediately that all artifacts found at a dig are usually retained by those in charge to become part of a county, state, or other permanent collection. Arrowheads, bones, pottery sherds, charcoal, or whatever will be recorded including location, depth, approximate age, with descriptions, photographs, and name of finder. Important finds will undergo carbon 14 analysis to

determine their approximate age.

Digging is carried out in thin layers once sod and top-soil have been removed. Discolored areas discovered below the plow line alert diggers to possible Indian garbage and storage pits, even possible burials. Levels separating different cultures and periods are kept in divisions and compartments. A word of warning. Never undertake digging for artifacts on your own (see sidebar). As Virginia archaeologist MacCord reminds amateurs and would-be professionals, "Ethically and morally, no one is justified in digging just for the fun of it. Dig-

ging can destroy valuable evidences of history unless it is done scientifically. The collector is governed by the laws of property and trespass on both private and government lands, just as any private citizen is expected to observe laws protecting land he or she uses for recreational activity."

What's important about surface searching or helping to dig up the past is the enjoyment and adventure of being outdoors, and participating alone or with others in helping to preserve traces of native Indian history for generations to come. □



Some Points to Remember

If the dig takes place on private property, the owners must grant permission, while if it is on public property, the state or federal governments view sites as being held in trust for the public, present and future, and findings belong to their departments or to archaeology or similar groups.

When relics are located on a construction site, work can usually be halted, if the location is on federal land. Many states do not have laws to cover finds on state-owned lands, and there is no law to govern finds on private property.

Those who wish to discover a broader scope of archaeology might volunteer to help with digs. Some are only day-long; others may last two weeks or longer. The American Anthropological Association (AAA), 1703 New Hampshire Ave., N.W., Washington, D.C. 20009, (202) 232-8000, publishes an annual "Summer Field School" list (send \$2.50 and a large, self-addressed, stamped envelope).

The Archaeological Institute of America (AIA), 53 Park Place, New York, New York 10007, (212) 732-6677, annually publishes the comprehensive "Archaeological Field Work and Opportunities Bulletin," which sells for \$3.50 (\$1.50 for AIA members). In addition to field schools, it lists excavations and volunteer programs all over the world. The bulletin also lists sites where amateur volunteers are permitted to work alongside professionals, if they have at least some knowledge of techniques.

Included among the listings in these publications are those which grant academic credit upon the completion of college courses; payment by participants is expected in those instances. However, in other field projects, amateur volunteers pay only for room and board and possibly a small additional sum to cover expenses.

The address for the Archaeological Society in Virginia is Lyle E. Browning, Bulletin/Newsletter Editor, 3812 Hawthorne Avenue, Richmond, Virginia 23222. □

-March Journal

First Hunt

The excitement of a first hunt is not easily forgotten. Several months ago, boys from the John Rolfe Middle School in Henrico County had the chance to experience just this.

Through the cooperative efforts of Ed Moseley, president of the Varina-Charles City Sportsman's Club, and Henry Keeton, a teacher at the school and sponsor of their Great Outdoors Club, these boys participated in a goose hunt on the James River.

Because the interests of the two clubs were similar—to promote good sportsmanship, increase understanding of the environment, and share hunting knowledge—Moseley felt that the middle school group would be appropriate representatives for their youth day hunt. Keeton and several hunt club members met in October to discuss plans for the event with the goals of raising community awareness of waterfowl hunting and providing the boys with a great hunting experience.

On Friday, November 9, the boys arrived at the hunt club with a full schedule ahead of them. That afternoon, they met with Virginia game warden Rick Perry for a talk on gun safety, and then were allowed to shoot skeet at the club's range. The club also showed several hunting and conservation movies in addition to serving a large dinner. Demonstrations on building wood duck houses, a goose calling competition, and a talk on the Ducks Unlimited program followed their meal. Before going to sleep the boys were matched up with hunt club guides for the next day.

Saturday morning the boys and their guides left for the blinds. Before they returned to the club for lunch, the students had bagged twenty-six geese.

The generous contribution of time by the hunt club, the hunter's sacrifice of opening day, and the planning by Keeton and Moseley provided the boys with a fantastic weekend of instruction, hunting, and fun.

by John Goodin

Acquisition Adds Acres to WMA



Roy Edwards

Commissioner Latane Trice (R) shakes hands with J. Robert Nolly, Jr. of the Nature Conservancy at the formal transfer of land in Charles City County. The property will increase the size of the Chickahominy Wildlife Management Area by 384 acres. The land previously belonged to the estate of H.N. Allen Jr. The area is at the southern end of current boundaries for the management area and is bordered by Morris Creek on the west side and the Chickahominy River on the east side. Total acreage in the Chickahominy Wildlife Area will now be 5,173 acres. Jim O'Hare, land coordinator for the Commission, says the acquisition provides for a more secure and complete boundary

line for overall management.

Jack Raybourne, game division chief, says the tract will augment the Commission's present wetland holdings and provide a rich natural habitat for non-game shore birds and wetland wildlife.

The area is also habitat for Long's Bitter Cress, a rare plant which thrives on the tidal flats. Acquisition was made possible through a coordinated effort of the Commission and The Nature Conservancy, who first purchased the land from the Allen estate and transferred ownership to the Commission. This is the seventh land protection project undertaken jointly by the Commission and The Nature Conservancy.

- March Journal

Non-Game Update

Endangered Mussels



R.J. Neves

Female mussel extends her modified mantle flap which mimics a fish. She pulsates the "fish" to attract the host fish. When the host fish strikes this lure, she releases her glochidia.

The endangered mussels of Virginia received considerable attention during 1984. A project to locate the habitat of juvenile freshwater mussels in Virginia's streams and rivers, initiated in 1983, is nearing completion. The lack of juvenile mussels in stream bottom samples collected

nationwide has baffled biologists for many years, and this study provides the first evidence of where these young critters reside. Research results indicate that most juveniles, particularly those only months old, occur behind boulders and in the fastwater sections of streams. Young

mussels begin life at a size smaller than a pinhead and are roughly 1/8 inch long at a year. Mortality rate during this first year of life in the stream bottom is high (50 percent) and declines to less than 10 percent per year once adulthood is reached. Juveniles reach sexual maturity at

three years and become reproductively active by four when they are roughly one inch long. Being able to locate and assess the relative abundance of these juveniles will provide biologists with a method for evaluating the reproductive success of both endangered and non-endangered mussel populations in streams.

A new project began in the fall of 1984 to study the life history of one endangered mussel species that occurs in the Clinch River of southwestern Virginia. Over the last several years it has become apparent that this species appears to be declining because of habitat loss, reproductive failure, and/or natural factors such as predation by the local muskrat population. This project has established and is sampling sites along the river where the species appears to be doing well and other sites where it is declining. Preliminary sampling at these sites indicates that the muskrat is the major predator on the adult segment of the population. All of the rivers in southwestern Virginia are being invaded by the exotic Asiatic clam (*Corbicula*) which now occurs in densities greater than 100 per square meter in many river sections. Because this exotic clam has habitat and food requirements similar to those of the native mussel species, competition for these life-sustaining resources may be occurring, putting the already endangered species in further jeopardy. Research activities are under way to understand the reproductive cycle of this endangered mussel and to identify those factors contributing to its decline in the river.

Non-endangered mussels transplanted into the North Fork Holston and Clinch Rivers, to re-establish populations eliminated by mercury contamination and toxic spills, respectively, were dispersed by the high flows in mid-summer resulting from heavy rainfall. River levels approached the record flows of 1977

(100-year flood level). Most of the mussels, originally transplanted in 1982, were scattered by the near-flood conditions and have resettled at various locations downstream of the transplant sites. Because of the unexpectedly high mortality of one transplant in the Clinch River, another transplant of adult mussels was made last summer to determine whether this section of river still presents a problem for mussel survival. In general, results of this study over the last two years indicate that current environmental conditions in these sections of the North Fork Holston and Clinch Rivers are suitable for mussels, other invertebrates and fish to return to those population levels that existed prior to the environmental contamination. We anticipate a nearly complete recovery within the next decade.

As a result of the research activities and experience that the Virginia Cooperative Fishery Research Unit has gained with endangered mussels in Virginia, problems with this faunal group in other states are now referred to the Virginia unit. For example, the U.S. Fish and Wildlife Service in 1984 asked the Virginia unit to compile all distributional and biological data on 18 endangered mussel species in the southeastern United States, to be computerized and stored in their new Endangered Species Information System. All information on federally listed threatened and endangered species eventually will be kept and accessed by federal and state agencies through this new system. The progress made in understanding the life history requirements and recovery needs for endangered mussels has been slow but steady. Research funded by the Virginia Commission of Game and Inland Fisheries is providing key information needed to assist with the recovery of this diverse segment of Virginia fauna. □

by R.J. Neves

About the Authors

Julie Mierau is a publicist for Camp Fire, Inc. in Kansas City, Missouri. *Roanoke Times-World News* outdoor editor **Bill Cochran** is a regular contributor to *Virginia Wildlife* as well as *Outdoor Life, Field & Stream* and *Sports Afield*. He was the first outdoor writer in Virginia to win the Governor's Conservation Communicator award. **C.H. "Kit" Shaffer**, former game biologist and field coordinator for the Game Commission, is recognized as a—if not “the”—Virginia authority on turkey hunting. He writes on that topic often for this and other magazines. **Greg Mertz** last wrote for us about field guides (February 1985). Having written for every national outdoor publication of note, **Gerald Almy** is now hunting and fishing editor for *Sports Afield*. The award-winning writer and his wife, Rebecca, are new parents (daughter Jarrett was born in November 1984), but fortunately, he's getting enough rest to write for us. Writer-photographer **Janet Shaffer**'s last contribution to *Virginia Wildlife* was an article on litter, “*Stewards of Tomorrow*” (June 1984). **John Goodin** is a student at the University of Richmond, doing a stint as editorial assistant through UR's Quill Program. □

-March Journal

Your Last Chance For Quail Stamp

Collectors have until May 1, 1985 to purchase the remaining 1982 Quail Unlimited conservation stamps. The stamps will be sold at face value of \$5.00 per stamp until the supply is depleted. Stamps on hand after the May deadline will be destroyed.

The Quail Unlimited stamp stands a chance of becoming rare and thus an investment since only 10,000 stamps were published and less than 1,000 are now left. The stamps are individually numbered.

The 1982 Quail Unlimited stamp/print in a limited edition of 1,500 is sold out and when one can be found it is selling as high as \$300 on the retail market. It initially sold for \$130. The retail value of the Quail Unlimited stamps is expected to jump to \$25 the day they sell out.

The 1985 stamp/print has been done in a limited edition of 1,500 prints and 10,000 stamps and features a bird dog on point by artist Phillip Crowe.

The Quail Unlimited stamp/print conservation program has allowed Quail Unlimited to expand its efforts into 21 states with local fund-raising chapters and state chapters planting hundreds of miles of habitat for quail and other upland game. Last year over \$170,000 was put into habitat projects by Quail Unlimited and the goal for 1985 is a quarter million dollars for local and state upland habitat projects.

A lot of the success of the Quail Unlimited program has been the result of the stamp and print conservation series. Many collectors and Quail Unlimited members are already recognizing the potential investment value of the program. They help conservation while making an investment that may return many times over the initial funds invested.

For more information on Quail Unlimited conservation stamps and prints, write to Quail Unlimited, Box 10041, Augusta, Georgia 30903. □

Soil is Theme for National Wildlife Week

"Soil . . . We Can't Grow Without It" is the theme for 1985's National Wildlife Week. Sponsored by the National Wildlife Federation, this year's activities will be from March 17th to 23rd.

This year Wildlife Week addresses the problems of soil erosion and the resulting runoff. Each year millions of dollars are lost as valuable top soil is washed from unprotected land and into our lakes, streams and rivers. The resulting loss of land and pollution of marine habitats, such as Chesapeake Bay, are major conservation problems. In Virginia, the Game Commission and the Virginia Wildlife Federation are mailing educational packets to public and private schools throughout the Commonwealth. These Wildlife Week kits include instructional materials and activities for the students. Some 7,600 kits are expected to be distributed in Virginia.

The activities in the kits will help students better understand soil as an element of their environment, and how to protect it. Information about National Wildlife Week in Virginia is available from Susan Gilley, P.O. Box 11104, Richmond, Virginia 23230-1104. □

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Illegal Stripper Sales Lead to Arrests

At a time when the status of the striped bass is in doubt in many eastern ocean and bay areas, it was heartening to see alleged striped bass black marketeers being taken to task for their nefarious activities.

In January, game wardens in cooperation with agents of the U.S. Fish and Wildlife Service arrested 119 persons in areas throughout the eastern U.S., including 10 men in Virginia. Those arrested were suspected of dealing in striped bass from both salt and freshwater areas. Fish from illegal commercial fishing operations and from individual freshwater anglers were being sold to coastal seafood dealers. The Virginia portion of the investigation centered on the illegal sale of striped bass from Gaston and Bugs Island Lakes.

Many caught in the roundup were also accused of selling deer, waterfowl, eagles, hawks and songbirds. □

Bear Harvest Sets Record

The 1983-84 hunting season proved to be one of the best in Virginia's history. The deer harvest was the third highest on record with 84,168 taken statewide. Although the turkey harvest declined 21 percent from last year, the total of 8,540 birds was still 21 percent above the previous 10-year average. The bear harvest set a record with 470 bears harvested—a 29 percent increase over 1983.

Game division chief Jack Raybourne attributed the high totals to unusually mild weather on weekends and holidays, when most hunters were out. This especially affected the bear season, as these animals delayed their denning because of the warm temperatures. A good food crop that scattered the turkeys, Raybourne noted, was the suspected cause of the decline in the turkey harvest.

Regional totals for these animals and the percentage change from last year include 52,764 deer harvested in the East (down 7 percent) and 31,392

deer taken in the West (up 10 percent). Turkey harvest in the East was 4,729 (down 29 percent) and 3,811 in the West (down 8 percent). Bear figures show 179 were taken in the East (up 44 percent) and 291 in the West (up 21 percent). Late-arriving game tags could alter these numbers.

by John Goodin

Wild Shows in March

March 1, 2, 3—Mid Atlantic Wildfowl Festival
Virginia Beach Pavilion

March 16, 17—Rappahannock River Waterfowl Art & Carving Show
Whitestone Firehouse
Whitestone, Virginia



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Bird of the Month

The Loggerhead Shrike

A medium-sized bird with quickly beating wings dashed low to the ground, hovered for a moment, then resumed its twisting, dodging flight amid a brushy fence row. A "spray" of smaller birds scattered into the brush along a small creek that led into an adjoining woods. The pursuing bird suddenly dove down along the creek, and after a few seconds, flew up to an overhanging branch with a small bird in its clutches. After a few moments, it flew back along the fencerow, struggling somewhat with the little winter wren it had caught, before landing again in a thorny shrub.

When we hear the term "predator," we probably first think of larger birds such as hawks and owls with swift or quiet wings, hooked beaks and strong, sharp-talonied feet. For some reason, the existence of one bird that kills another is viewed by some as a bloodthirsty mistake of nature! Yet, predatory creatures form an important link in the chain that is our ecological system. Every wild creature preys on some other creature. It's a fact of life. Hummingbirds prey on tiny insects, while robins prey on worms. Kingfishers prey on fish. They all either swallow their prey whole or pummel and tear them to death. In the animal world, as we know it, living things are sacrificed so that other living things may survive.

One of the most interesting predatory birds is the loggerhead shrike, usually regarded as a songbird. Its scientific name, *Lanius ludovicianus*, translates "Butcher of Louisiana"! It has some other interesting names, as well. It is called French mockingbird because of its coloration, similar to that of the mockingbird. The reference to "French" and the inclusion of "Louisiana" in its name undoubtedly refer to the fact that this bird was probably first recorded and named in French-influenced Louisiana. The name "butcherbird" originates from the shrike's habit of instinctively impaling its prey on thorns or other

sharp, pointed objects. A thorny shrub with various types of prey is often called "the butcherbird's kitchen." Obviously, this practice only serves to further horrify those individuals who find predation repugnant.

The loggerhead shrike is gray above and whitish below, with black wings and tail. The tail is edged in white and the wings have a white patch at the wrist. Its black marks and hooked beak add to its sinister reputation. In silhouette, its head appears oversized and somewhat resembles a sparrow hawk; the shrike is smaller, however, measuring about eight or nine inches. While they resemble the mockingbird in coloration, shrikes are not as slim and don't flash as much white on their wings.

The flight of the shrike is weak and fluttery, slightly undulating. When it flies to a perch, it swoops upward to land, a good identification habit in the field. It flies with quick, shallow wing beats, followed by a sail. Shrikes are solitary birds that seek out a variety of lookout perches such as low tree-tops, the ends of branches, poles, posts, fences or wires, much like kingbirds and other flycatchers do in summer. From these vantage points they can wait and watch. Actually, insects make up most of the shrike's diet, constituting some 70 percent or more, with vertebrates making up 30 percent or less. Grasshoppers, crickets, rodents, small snakes, lizards and birds are its main foods. Birds make up only about eight percent of the total, according to one study. Most predation on birds takes place in winter when insects are not available.

The shrike doesn't appear fast enough to catch other birds, but what it lacks in hawk-like swiftness, it makes up for in maneuverability and persistence. It often catches and kills birds as large as itself and must virtually haul them away with beak and claw! Once it takes pursuit, this bird is almost unshakable. It may fly down to its prey, or hover over it before diving on it or giving chase. Its prey is impaled on the thorns of shrubs or trees, barbed wire or nails, or is wedged in the crotch of a branch. Apparently, its feet are too weak to

effectively grip its prey, so it impales or wedges its prey to merely hold it in place so it can eat. Much of the food is never consumed by the shrike, but its "kitchen" is frequently raided by other birds. Shrikes regurgitate pellets of non-digestible material in much the same way an owl does.

Shrikes inhabit open country with low, scattered shrubs and trees, especially brushy fields with wooded hedgerows. They nest in dense, thorny shrubs such as hawthorne, wild crab or thornapple, building a bulky nest of twigs, grasses, weeds, animal hair and feathers. It is normally built towards the center of the shrub, about 10 feet off the ground. The four to seven creamy-white eggs are flecked with brown and hatch in about 14 days. A diet of insects, pieces of reptiles, mammals and birds helps the young to mature quickly to flight stage in another two weeks. The young are similar to the parents, but are brownish in color with light barring on the breast.

A similar species is the slightly larger northern shrike which occasionally wanders south to Virginia in winter. It breeds mainly in northern Canada and Alaska. The loggerhead, on the other hand, breeds as far north as the Canadian prairies, but winters south of a line from Missouri to Virginia in the eastern United States. It is seldom found in the mountainous regions. The loggerhead, incidentally, was once referred to as the migrant shrike. I recall one winter in the mid-70's when I saw no fewer than nine shrikes while driving through Amelia and Nottoway Counties.

The loggerhead shrike will soon be the subject of a study by Dr. James Fraser and a graduate student at Virginia Tech. The study will be co-funded by the Non-Game and Endangered Species Program and the U.S. Fish and Wildlife Service. We can all aid in learning more about shrikes by designating a part of our tax refund to the Non-Game and Endangered Species Program, or we can make direct donations. Any information on shrikes will be welcome, as well. □

by Carl "Spike" Knuth

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